

One World Money, Then and Now

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There is an undeniable and immediate appeal about the idea of a single world currency, analogous to that of a universal system of measurement. We are all frustrated whenever we try to change money at apparently unfair prices in airports or hotels. In 1866 a U.S. Congressional Coinage Committee expressed exactly this sentiment when it concluded that “the only interest of any nation that could possibly be injuriously affected by the establishment of this uniformity is that of the money-changers – an interest which contributes little to the public welfare.” (Russell 1898, p. 35) Going beyond the personal feelings, it is possible to make a broader argument.

One argument is about what we might like to do: In a global and inter-connected world, we should like to be able easily to assess values and prices and compare them from one end of the world to the other. The attraction of a single world currency is that it makes a simple snapshot comparison of prices at any one moment. Walter Bagehot and his influential periodical *The Economist* in the mid-nineteenth century pleaded vigorously in favor of what seemed like a common sense solution: “Commerce is anywhere identical: buying and selling, lending and borrowing, are alike all the world over, and all matters concerning them ought universally to be alike too.” (Bagehot 1869) This obvious appeal was accepted by all the luminaries of the time, including John Stuart Mill and Stanley Jevons. Over a century later, the frustration of losing money in repeated conversion transactions was often given as a rationale for European monetary union, and the same argument can today obviously be made on a wider and global scale.

A second version of the argument is stronger and predictive: it is about what we will do. In his work on “The Origin of Money”, Carl

Menger (1892) at the height of the previous wave of globalization argued that the advantage of using the same medium of exchange as one's potential trading partners leads a network of merchants to accept a common medium of exchange and unit of account.

In the nineteenth century, the idea of global currency convergence was greatly furthered by the chance nearly (but unfortunately not complete) neat arithmetic ratio of the major currencies, nearly five francs to one dollar, and nearly five dollars to one pound. At the beginning of the twenty-first century, at the moment when the euro rose from its original value to parity with the dollar, and the dollar was nearly an arithmetically neat figure of one hundred yen, the world currency movement received a further boost.

A third version of the argument emphasizes policy advantages. Thus, in a recent survey of "Financial Statecraft", Benn Steil and Robert Litan argue that a widespread dollarization would reduce the risk of financial crises in emerging markets. A more universal currency would minimize the risk of disastrous consequences of those crises, which include pauperization, the rise of anti-globalization sentiment, and the spread of mafia-like organizations that breed on financial distress (Steil and Litan, 2006).

In this paper, we look at the major arguments for monetary simplification and unification before explaining why the nineteenth century utopia is an idea whose time has gone, not come.

1. Transaction Costs:

The most obvious consequence of a universal standard of monetary measurement is that it makes transactions easier and cheaper, and might thus be expected to increase the number of mutually beneficial economic interactions. At the outset of the last

great era of globalization, in the 1850s and 1860s, with a move to free trade following the Cobden-Chevalier Treaty of 1860, a serious effort to introduce a unified world money occurred. Already in 1848 John Stuart Mill in the *Principles of Political Economy* casually remarked that only political obstacles stood in the way of an inevitable world monetary unification (“let us suppose that all countries had the same currency, as in the progress of political improvement they one day will have”, Mill, p. 614). The transaction costs of a diversity of coinages was very considerable, since precious metal coins (of different degrees of fineness) circulated across national frontiers, and created complicated problems of measurement.

Some of the answers, it was hoped, could be found in regional monetary unions, in that neighboring countries tended to trade more frequently with each other, and currencies moved across their frontiers. The most important and influential such union, although not the most successful one, was the Latin Monetary Union of 1865, which was intended as a solution to the problem of silver coins of 835 fineness minted in Italy and Switzerland flooding into France and Belgium, where a 900 fineness was still in place. Each country still minted its own coins, but they were of a standard weight and fineness, so that the Belgian, French and Swiss francs and the Italian lira were in practice identical. The high water mark of the movement to world money was the international monetary conference called by Napoleon III in 1867, which was intended to establish a similar agreement on a broader international stage. The extension of the LMU principle – originally developed in the 1863 International Statistical Conference in Berlin – would involve a definition of a dollar as an equivalent to five francs, and of the British pound to five dollars or twenty-five francs. Such a redefinition would mean only relatively small changes in the

metallic equivalent of the U.S. and British currencies (the pound was at a par of 25.22 Francs).

In the debates of the 1860s, some economists drew on historical arguments in their support. The Franco-Polish economist L. Wolowski in 1868 quoted Turgot as stating that "gold and silver are constituted, by the nature of things, as money and universal money, independently of all convention and all law." (Einaudi 2001 p.76) Mill set out by regarding money as a foreign commodity, whose "value and distribution must therefore be regulated, not by the law of value which obtains in adjacent places, but by that which is applicable to imported commodities – the law of International Values." (Mill, p. 607)

The reference to Turgot makes the most important point about these early debates. They proceeded from the assumption of a universal reference in metallic money, and aimed at the simplification and rationalization of national moneys in terms of weights of precious metals.

The vision of 1867 was never realized, and the experience of the 1860s is a good illustration of some of the difficulties on the road to monetary union. The small differences in existing values from the 25:5:1 ratio frustrated any agreement. The British delegates thought that the world should be united around a sterling standard, Americans already looked to the dollar, a few Germans thought that a new German currency could be the basis for the world's money, and most of the French unsurprisingly liked Napoleon III' suggestion, which the principal French negotiator, de Parieu, liked to trace back to Napoleon's uncle musing on the state of the world on the island of Saint Helena. (A small minority, however, called for a more rationally decimal approach, in which the new currency would simply be based on decimal multiples of grams of gold.) (Einaudi 2001)

The major gains of such a move would have been a simplification of some of the more complicated arithmetic of currency conversion in making commercial transactions in the late nineteenth century. But it would not have made much of a difference in policy terms to a world where the major industrial countries in practice accepted the gold standard from the 1870s.

2. Establishing Credibility

The second argument for ambitious schemes of cross-national monetary integration is concerned with improving the policy environment. In particular, there arises in some political cultures a conviction that the state cannot really be trusted to maintain a stable currency, usually because of a poor fiscal regime and strong political pressures. Hence pressure for independent central banks, or – in an environment when these too would be likely to be influenced by the pervasive force of politics – for making a money that is incapable of abuse. The argument about the desirability of “tying hands” (a term originally coined by Giavazzi Giovannini and Pagano, 1986) was the most frequent one made in the early stages of the debate about a move to a European Monetary Union, when in the 1980s many European states had a very bad policy environment (Giavazzi Giovannini and Pagano, 1986; Melitz, 1988)

The character of the political problem is easily demonstrable by reference to the early history of the Latin Monetary Union (Einaudi). Not all governments found it easy to maintain the policies that would sustain convertibility. Italy posed a problem to the LMU because it almost immediately faced the massive cost of the war of unification against Austria (1866) and introduced an inconvertible paper currency issued by the central bank (Banca Nazionale nel Regno). Another

problem was highlighted when another high deficit country, the small Papal States, joined the LMU, and over-issued low value silver subsidiary coinage. Napoleon III swallowed his outrage because he did not want to offend French Catholics by condemning the monetary policy of the Holy Father. When other countries, such as Greece, wanted to join the LMU, France insisted that the Greek subsidiary coinage be minted in France, in order to subject the quantity of issue to real control. Without really tight and complete domestic controls, the only way of making the international monetary union incapable of abuse was an extensive restriction of sovereignty.

Sovereignty became more and more important as a political good in the course of the nineteenth and twentieth centuries, with the advance of democracy or popular government. This trend was already obvious in British populist reactions to the government's plans of the 1860s to go for an international currency by making a slight alteration to the British mint parity. The satirical magazine *Punch* accused the Chancellor of the Exchequer of "debasing the sovereign ... to please the French." (Einaudi, p. 156)

Since larger scale war was infrequent in the nineteenth century (with the exception of the German, Italian and U.S. civil wars or wars of unification in the 1860s), the fiscal issues behind the confidence debate did not appear as clearly as they did in the twentieth century. But it was not just a matter of military cost: the twentieth century was the great period of national money, in which states insisted on monetary sovereignty in order to facilitate domestic policy objectives (especially full employment) (Polanyi 1944, Eichengreen 1992a). States also appreciated the room that monetary policy gave for the expression of power in international affairs (Gilpin 2000). But both of these applications involved high costs, and generated inflation and

hyper-inflation. The increasingly urgent proposals for world money are best understood as ways of reducing these costs. It was vital to endow a currency with an external source of credibility.

“Hard fixes” that looked closer to monetary unions were adopted largely in order to establish anti-inflationary credibility in political economies that had been destroyed by prolonged experience of fiscal deficits and inflation. The hard fixes – or more generally the bolder and more comprehensive proposals for world union – were also intended to deal with the so-called “original sin” problem (Eichengreen and Hausmann 2004): the weakness in emerging market economies that results from the inability to borrow long-term in domestic currency. In emerging markets, companies faced an unpleasant choice, in that if they incurred liabilities in domestic currency, they could only borrow short term and there would be a term mismatch with their assets. If they borrowed in a foreign currency, they would be vulnerable to exchange rate deterioration. The consequence is that such companies did not borrow as much as they should have done; and this result may help explain the well known Lucas paradox that so little capital actually flows to poorer economies where there are plentiful potential productivity gains (Clemens and Williamson 2000). In addition, sovereign borrowers in emerging markets with original sin risk debt crises because of balance sheet mismatches following sudden stops or reversals of capital inflows.

Like the LMU, the historical record on this search for externally endowed credibility is at best patchy. Most of the very celebrated fixes, whose architects were feted as the heroes of international finance, came unstuck within a decade or less: the great German stabilization of 1923-4 after the hyper-inflation, when Hjalmar Schacht orchestrated a very hard fix on the dollar, which blew up in the world

depression; the Chilean stabilization of 1979, which led to a banking and financial crisis three years later; or Domingo Cavallo's currency board-like stabilization of Argentina in 1990 (Frankel and Rose 1998). The development of the European Monetary Union is impressive, but the institution of independent central banks was laid down in the Maastricht Treaty as a prerequisite for the accession to the monetary union; and it might be argued that with a credible commitment to independent central banks there was no longer any need for the additional step of monetary union as a disciplining measure.

3. Stopping Bad Policy in Other States

A frequent source of concern in the international monetary system, however, is not concerned with bad policy in one's own country, but about the bad effects of spillovers from bad policy in other countries, especially very powerful countries. This case for monetary internationalism was made very forcefully by von Hayek in the 1930s, which was the great age of monetary nationalism as well as of strikingly bad policies. Hayek reached the conclusion that "independent regulation of different national currencies cannot be regarded as in any sense a substitute for a rationally regulated world monetary system." (von Hayek, 1939, p. 74)

In the postwar era, the main form this sentiment took was the belief that the policies of the United States were harming the rest of the world. This sentiment gave rise to Keynes' attempt to devise *bancor* as a non-dollar currency; to the famous Rueff and de Gaulle critique of the mid-1960s, as well as to French attempts to introduce a collective reserve unit (which in a very watered-down version

produced the SDR, which cannot really be regarded as a money); to later attempts at the IMF to devise a "substitution account"; and was an accompaniment at both a political and academic level to the European drive to monetary integration. In 1988, for instance, Robert Triffin renewed the critique of the "fantastic US deficits and capital imports" which were "unsustainable as well as unacceptable" and revived the idea of a substitution account denominated in ECUs. (Triffin 1988, 42) French President Valéry Giscard d'Estaing at the first economic summit at Rambouillet in 1975 denounced flexible exchange rates as a "decadent" idea that fostered the abuse of monetary standards.

If it were true that one large and powerful country were pursuing very harmful monetary policies, this line of argument would have an obvious appeal; but at the same time, it might well face difficulties in actually implementing a world monetary reform, in that the large country might well not feel sympathetic to the critique and would use every opportunity to block or frustrate the implementation of "reform". Such was indeed the fate of *bancor*, the French 1960s CRU, and the substitution account.

4. Political Integration via Money

Most of the literature on monetary unions puts a great degree of emphasis on "political will" as explaining the emergence and also the collapse of monetary unions. Nineteenth century Europe in consequence developed a state theory of money, associated most prominently with G.F. Knapp. Most successful cases of currency unions emerged in a national setting, such as the United States or the German Empire of 1871, where a single political system was required before currency could be standardized. The monetary unions were

successful when the political situation worked. Conversely, the Austro-Hungarian currency union, and the single currencies of Yugoslavia and the Soviet Union fell apart with the dissolution of the political structures that had kept them in place. (Cohen 1998; Bordo and Jonung 2003) Political integration in this rationale appears as a necessary and inescapable accompaniment of monetary integration.

At the end of the twentieth century, the idea of supranational monetary unions was revived again, especially in Europe. Some of the rationale behind European monetary integration was concerned with a reduction of transactions costs as a way of making capital markets operate more efficiently; and with establishing an externally generated mechanism in some states (notably Italy) that could give political weight to fiscal reform. But there was a third, and more fundamental, driver of European monetary integration. In Europe, the push to monetary union was part of a process that was intended to drive closer political union, and the logic of monetary union required (and continues to require) a further degree of political coordination, in particular in regard to fiscal policy. This had been seen from an early stage. Already in 1950, Jacques Rueff had prophesied that "Europe will be made by money or it will not be made."

The Fading Attractions of Monetary Union:

The reasons for monetary integration as set out above are becoming increasingly less persuasive.

1. The transaction costs argument is obviously permanently attractive, but transactions costs have been reduced by more extensive currency markets and by the possibility of using hedging to eliminate risk in forward transactions. Most analysts now recognize

that the theory of optimum currency areas does not fit very well with the story of actual monetary unions.

The Optimum Currency Area argument was developed in the early 1960s by Mundell (1961), McKinnon (1963) and Kenen (1969) early in response to the ongoing debate over fixed versus floating exchange rates. An OCA was viewed as a geographic area in which the benefits of a single currency in terms of reduced transaction costs outweighed the costs of giving up the use of domestic monetary policy to offset the effects of asymmetric shocks. The early approaches to OCA assumed a Keynesian world with nominal wage rigidity and labor immobility. In such an environment a monetary union between disparate regions would only work to the extent that it was complemented by a fiscal union (fiscal federalism), which would compensate those areas already affected by the shocks which an independent monetary policy could have offset. Such a fiscal arrangement generally depends on a high degree of political integration. In addition to the degree of labor mobility, the theory stressed openness: the more open an economy as measured by the share of traded goods, the greater the benefits of a reduction in transaction costs.

OCA criteria were extended for the discussion about EMU in the 1980s and 1990s (Eichengreen 1996). Empirical evidence on the degree of labor mobility within Europe, the incidence of asymmetric shocks, and the possibility of fiscal federalism concluded that the European Union was not an OCA, and that it compared unfavorably with the experiences of federations such as the US or Canada. Despite this negative evidence, the EMU project was successfully driven forward by the political agenda for European integration.

A recent evaluation (Bordo 2003) suggests that since the launching of EMU, limited progress has been made in meeting the OCA criteria. This raises the possibility that areas which do not qualify ex ante as OCAs may actually ex post become OCAs. Frankel and Rose have thus recently argued that ex post integration of goods and capital markets follows monetary union. In rationalizing production across national boundaries, the asymmetry of real output movements between members is reduced, and hence there is less of a need either for fiscal transfers or for the preservation of independent monetary policies.¹

The recent debate seems to reinforce the conclusion of Goodhart (1995, p. 452) that : "The evidence therefore suggests that the theory of optimum currency areas has relatively little predictive power.... The boundaries of states rarely coincide with optimum currency areas, and changes in boundaries causing changes in currency domains rarely reflect shifts in optimum currency areas."

2. In terms of economic stabilization, original sin is becoming less of a problem with a combination of a better policy environment in many emerging markets, and more sophisticated financial markets. Mexico, for instance, in 2000 started to issue three and five year fixed rate bonds, and by 2003 was issuing twenty year bonds. Moreover in smaller advanced countries which have original sin in the sense that they needed to issue foreign currency denominated debt, the likelihood that this exposed them to financial crisis is remote (Bordo and Meissner 2005). Indeed over the past fifteen years, many countries have embarked on a "graduation" that makes the discipline imposed

¹ Eichengreen 1992b and Krugman 1993 present the opposed case, that monetary union leads to increased specialization between countries rather than rationalization, and hence increases rather than reduces the likelihood that the correlation of output movements would be negative.

by a strong or irrevocably fixed external anchor less essential to economic success.

3. Monetary policy in the world in general is improving with a better understanding of appropriate goals and instruments. In particular, there is a generalized understanding that bad policy hurts the country that is pursuing it, without bringing much in the way of long term gain. Advanced countries have developed a domestic fiat money nominal anchor based on central bank independence and inflation targeting (both explicit and implicit). There is hence less of a need for coercive action to stop big and powerful states from undertaking the wrong sort of monetary action. Apart from this, it would not be easy to make such external pressure on policy really effective.

4. On the political level, it is doubtful whether monetary and political union can any longer be presented as the reason why states in contemporary Europe are unlikely to go to war with each other. The European experience is also recognized as a quite unique one, that is not easily transferred to other parts of the world. The political framework underpinning EMU depended on two states of more or less equivalent economic weight, France and Germany, reaching a balanced deal. It is difficult to see what state relationships would provide a similar basis for monetary integration in East Asia, Latin America, or the Middle East.

A new view of money:

We have a different concept of money to the one that underlay the nineteenth century discussions. Then there was an assumption of a single reference external to the state, which was most obviously reflected in the definition of value in terms of precious metals. We might term this a Newtonian conception of the world, in which there

are measurable terms that can be used to establish fixed and determinate relations. (By a curious coincidence, Isaac Newton was one of the key influences in establishing this view of money in Britain, whose currency order proved to be paradigmatic for nineteenth century stabilization). Mill described "the whole doctrine of international values" as possessing "a unity and harmony which is a strong collateral presumption of truth." (Mill, p. 627)

In the twentieth century, however, views of money shifted to a more Einsteinian or relativistic conception. Measures of value that can move relative to each other are helpful in terms of dealing with large shifts in relative prices, that will affect different countries very differently. In particular, we may not wish so much to use money as a metric to compare all international prices at one moment, but rather to compare prices over a time dimension in one particular context. But in order to do this, a different management of money is appropriate in different contexts.

In particular, globalization is associated with big changes in the relation of tradable to non-tradable prices. Emerging market countries are likely for some time to experience rising inflation as prices for services rise, corresponding to the increased incomes producers of tradables derive from selling to global markets (Belassa effect). Correspondingly, mature markets are likely to experience periodic bouts of anxiety about deflation, as competition on markets for tradable goods and services drives down prices.

Requiring these two types of countries to have a single currency or a permanent fix would be likely to produce serious problems in one or both. The mature markets should have monetary policies that are less restricted than they were in the past by fears of deflation. The

emerging markets should be free to conduct tighter policies to minimize the possibilities of destabilizing surges in asset prices.

In the absence of the monetary flexibility given by an exchange rate system, political pressures in both blocs will be likely to lead to the adoption of measures that are more destructive of prosperity than a multiplicity of currencies: in particular, the mature economies would be more likely to see the solution to the deflationary danger in terms of measures of trade protection and restriction. Moves to world currency would therefore be likely to lead to restrictions on world trade; and the world trade system is better off with the possibility of adjustment mechanisms through exchange rates. It is the demand for an adjustment mechanism that the Einsteinian view of monetary standards can satisfy, and the Newtonian one cannot.

The history of relations of core and periphery:

The tensions between core and periphery have a historical dimension that makes it difficult to conceive of a true global currency, as opposed to a small-scale union between a number of countries at the core (such as EMU) or at the periphery (such as the CFA franc area). Such strains can be observed in previous monetary eras, when the international monetary order, under the gold standard or in Bretton Woods, mimicked aspects of an international money. Under the pre-1914 gold standard, the core or developed countries were fixed on gold, but the periphery had episodes of trying to conform to the golden rule, and then being forced off (Bordo and Flandreau 2003). That was an exercise in transferring instability and its costs from the core to the periphery, that could be managed politically in a world of imperialism (in some cases, such as the British empire, the extension of imperial rule with its guarantees of order may have

provided a compensatory counter-weight to the instability generated by the single money). It could not really be managed in a world in which the periphery has a greatly enhanced self—confidence, and in which democratic institutions are spreading.²

A good – if terrifying – example of what can go wrong is of one peripheral country which for reasons connected both to international political prestige and because it hoped to get better access to foreign funds believed it should tie itself to the gold standard of the core. In order to join the single world money of the time, Russia under Finance Ministers Bunge and Vishnegradskii first imposed a severe deflation on itself, that is often blamed for the famine of the early 1890s; then it experienced a series of asset price booms and busts tied to inflows of foreign capital. In relation to industrial shares and other securities, some of the cost was born by foreign investors; but in regard to agricultural property, the inflation of assets radicalized the small farm owners, and contributed to the growth of revolutionary sentiment.

Another famous example of the difficult of monetary management in the periphery was Argentina, which (like Russia) was growing in the late nineteenth century at a spectacular pace. Within four years of stabilizing the currency on a metallic standard (in 1881), it experienced a surge of capital inflows (with a current account deficit of 38 percent of GDP in one year, 1884), and a wave of speculation that led to the government introducing a separate, domestic paper standard. Again, and as in Russia, inflation and speculation prompted massive social unrest.

² There was no obvious solution to the problem of the periphery: countries that avoided the gold standard discipline and floated suffered the adverse balance-sheet effects of devaluations; while those who followed the gold standard ran the risks of speculative inflows followed by collapses. Both cases are explicable as a weakness following from inadequate financial development, that goes deeper than simply the question of the choice of exchange rate.

The Bretton Woods era has recently been at the center of a revival of interest, as a model for Asian currencies' relations to the U.S. dollar. Dooley, Folkerts-Landau and Garber 2003 suggest that it offers an attractive analogy in that dynamic Asian producers have accepted a mutually beneficial bargain similar to that of West Germany and Japan in the 1960s. In this interpretation, dynamic growth areas are happy to accept an undervalued exchange rate and imported inflation in order to generate jobs by an export subsidy through the undervalued currency. In Germany and Japan, export interests pressed heavily against any suggestion of revaluation, in the Japanese case blocking it entirely, and in the German case delaying revaluations until they were both too late and too small to correct the problem. DFG interpret the modern Chinese commitment to maintain a peg, with only small or cosmetic shifts, in a similar way. It cannot be explained on stability or anti-inflationary grounds. The mutual benefits mean that this is a quite stable system, that would offer a suitable basis for a world money.

The parallel between the 1960s and the present is actually not a very good one. In particular, it is not clear that the 1960s deal was perceived as being mutually beneficial in Japan or Germany, and these countries (equivalent to an emerging market periphery) had no input in making U.S. monetary policy. There is no doubt, however, that the result was highly controversial in Germany and Japan in the 1960s. It clearly brought a high level of inflation, which was offensive in particular to an emerging sense of what the Bundesbank's theorists liked to refer to as a "stability culture". The surplus positions and capital flows which were the consequence of the increasing undervaluation of the expanding currencies were absorbed by central banks, which saw big increases in their dollar reserves. In the face of

some criticism from the central banks, the German and Japanese governments explained the accumulation of reserves as a price their countries needed to pay for the security provided by the United States. Indeed, the Bundesbank President, Karl Blessing, in March 1967 signed the so-called Blessing letter, in which he committed the Bundesbank not to exchange its surplus dollars for gold in an explicit recognition that this was the price that Germany needed to pay for the maintenance of the U.S. military presence in Germany.

There is clearly no modern analogy to this side of the Bretton Woods bargain. China has no reason to imagine that it should defer to the United States over security issues. Both sides are likely to have long term divergences in the interpretation of where their interests lie. The U.S. will be worried about deflation and the loss of jobs; and China will want to raise incomes more substantially in order to ward off political discontent. If these preferences emerge as major political themes, the link between the currencies becomes unsustainable. The Chinese preference would seem deflationary to the US, and the US preference inflationary for China. (This kind of divergence over overall goals is already noticeable in the debate about whether Lithuania and Estonia are suitable candidates for EMU because of their high inflation rates, that demand a stricter monetary response.)

It is striking how the most widely touted proposals for world money do not attempt to deal with the issue of who is making policy and in whose interest. Robert Mundell's most precise formulation of the path to world money took an agreement of a "G-3" (the United States, Euroland and Japan) as its basis: "The simplest approach would be to select one currency as the anchor and assign the central banks of the other two the task of keeping their currencies fixed to the anchor currency. Responsibility for monetary policy would be

coordinated by the anchor currency area. Other things being equal, the largest currency area would be the best candidate as anchor.” This approach may appeal to European sensibilities, in that it identified Europe as providing the largest currency area. But it is already beginning to look dated. Should we use the renminbi as the anchor currency when China becomes the largest currency area?

The currency arrangements of the past that most resembled a proposal for a world money relied on the clear strategic superiority of the part of the world whose money was the key to the international system. Many observers in consequence believed that the security system and the monetary order were intertwined. When both the security and the economic balance is shifting quickly, as they are at present, the political dynamics that are essential to successful currency and monetary unions are simply not there. Fortunately, “Einsteinian money” is capable of accommodating shifts that were politically destructive in the Newtonian world.

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